PHOTOGRAPHIC INTERPRETATION REPORT

LOMONOSOV ATOMIC ENERGY FACILITY USSR

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INSTALLATION OR ACTIVITY NAME	COUNTRY
Lomonosov Atomic Energy Facility	UR

25X1A

UTM COORDINATES	GEOGRAPHIC COORDINATES
NA	59-51-10N 029-02-50E

[redacted]

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MAP REFERENCE

AMS Series N701, Sheet 4437 I, scale 1:50,000

[redacted]

REQUIREMENT	NEGATION DATE (If required)
NA	NA
	NPIC PROJECT
	124321NK

ABSTRACT

The Lomonosov Atomic Energy Facility, USSR, located on the Gulf of Finland, comprises several areas apparently concerned with atomic energy. Although the possible reactor area appears structurally complete, it is not yet operational. Construction is continuing elsewhere at the facility. This report presents a descriptive chronology of construction observed in three significant areas of the facility and photographic illustrations of the facility and the two nuclear-associated areas.

INTRODUCTION

The Lomonosov Atomic Energy Facility is located on the Gulf of Finland, 23 nautical miles (nm) west of Lomonosov and 40 nm west of Leningrad, USSR. Construction activity at the site was first observed on photography of [redacted] all pertinent imagery 25X1D
25X1D [redacted] has been used in the preparation of this report.

BASIC DESCRIPTION

The facility (Figure 1) consists of a possible reactor area (Figure 2), a probable nuclear powerplant under construction (Figure 3), an area in the early stages of construction, a construction support area, and a housing area.

Possible Reactor Area (Area 1)

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Activity at the possible reactor area (area 1, Figure 1, and Figure 2) was first evident in [redacted] when a perimeter fence was observed enclosing a rectangular area containing a
25X1D road system. [redacted] the clearing of brush and ground scarring for high-bay building 1 had occurred, and preliminary construction was also under way for a laboratory/service-type building to the south. Also discernible were a support building, an administration building, a service building, and the eastern portion of a water intake channel.

25X1D Coverage of [redacted] revealed that the two outer halls of high-bay building 1 and an adjacent large building to the north had been erected. The south wall of the laboratory/service-type building and ground scarring for high-bay building 2 were discernible. The water intake channel had been extended to the shoreline and a breakwater built where this channel enters the Gulf of Finland. An excavation for a pumping station was visible at the water intake channel, and construction of the water effluent channel had been started. A railroad led from the construction support area, past the east side of high-bay building 1, to the site of high-bay building 2.

25X1D [redacted] a center high-bay section had been erected between the two halls of high-bay building 1. High-bay building 2 was in the early stages of construction, and construction of the three remaining walls of the laboratory/service-type building was
25X1D continuing. Coverage of [redacted] indicated that the west hall of high-bay building 2 was apparently complete and that the wall of the east hall had been started. The construction of the laboratory/service-type building continued. [redacted] the east hall of high-bay 25X1D
building 2 had been completed and the high-bay section constructed. The water pumping station was nearing completion.

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The laboratory/service-type building was apparently complete by [redacted] and the effluent channel had been extended to the perimeter fencing. A large laboratory-type building south of high-bay building 2 was in the early stages of construction. A ventilation stack was also discernible on this imagery. 25X1D

[redacted] the fan/filter building had been completed, and the laboratory-type building was nearing completion. Coverage of [redacted] indicated that a portion of the rail line east of both high-bay buildings had been removed. 25X1D 25X1D

The overall measurements* of the two high-bay buildings are [redacted] Each high-bay section is [redacted] with the western and eastern halls measuring [redacted] respectively. The laboratory/service-type building between the two high-bay buildings measures [redacted] and is connected to high-bay building 1 by a covered corridor of pipe gallery [redacted] The ventilation stack is 330 feet high and the fan/filter building [redacted] The laboratory-type building is [redacted] has an entrance portion [redacted] and has numerous vents on the roof. 25X1D 25X1D 25X1D 25X1D 25X1D 25X1D 25X1D 25X1D 25X1D

Construction in the area was first observed in [redacted] and the buildings were structurally complete by [redacted] Construction time for high-bay building 1 extended [redacted] and for high-bay building 2 from [redacted] A comparison of these buildings with the plutonium production reactors at the Tomsk Atomic Energy Complex, USSR,[1] reveals that no rail-served, irradiated fuel removal building has been constructed at the Lomonosov facility. Excavations for the housing of reactor vessels at the high-bay buildings could not be identified during the construction phase of these buildings. Area 1 is not yet operational. 25X1D 25X1D 25X1D 25X1D 25X1D

Probable Nuclear Powerplant (Area 2)

[redacted] underbrush had been cleared at the site of the probable nuclear powerplant (area 2, Figure 1, and Figure 3), and earth scarring for a worker housing section was visible nearby. Photography [redacted] revealed perimeter roads in the area of the probable nuclear powerplant and the start of preliminary excavation work. The worker housing section was in the early stages of construction. 25X1D 25X1D

[redacted] the probable reactor building (south) was in the early stages of construction, and approximately 31 workers houses had been completed. A large service building was under construction south of the probable reactor building. Considerable construction activity occurred during the two months preceding [redacted] Construction continued on the southern probable reactor building, and the walls of an adjoining probable generator hall were in the early stages of construction; both buildings were located in excavations. An excavation for a water pumping station was discernible west of the probable generator hall, a water intake channel was in the early stages of construction, the large service building was still under construction, and ten houses had been added to the worker housing section. 25X1D 25X1D

[redacted] the probable reactor building (south) was still under construction, and the probable reactor building (north), in the early stages of construction, was first identified. Also under construction was a long, rectangular building joining the north and south probable reactor buildings. A dining hall and several storage buildings had been added to the worker housing section. 25X1D 25X1D

Wall construction forms observed at the southern probable reactor building in [redacted] indicated that the building would have thick concrete walls. The walls of the northern probable reactor building were discernible encompassing concrete shielding for a probable reactor vessel. The building walls also appeared to be of concrete construction. The base for a ventilation stack, the water pumping station, and a possible effluent channel were in the early stages of construction. The area appeared to be partially secured. Construction was continuing in [redacted] 25X1D 25X1D

The overall measurements of the southern and northern probable reactor buildings with the connecting building are 715 by 100 feet. The inside dimensions of the southern and

*Horizontal dimensions are accurate to within ± [redacted] with a 95 % confidence level. Vertical dimensions are accurate to within [redacted] 25X1D 25X1D

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northern probable reactor buildings are approximately [redacted] (scaffolding prevents accurate determination) [redacted] The adjoining probable generator hall is 1,120 by 210 feet. This size compares favorably with the generator hall in area 1 of the Tomsk Atomic Energy Complex, USSR [redacted] 1 The inside diameter at the base of the ventilation stack is [redacted] the outside diameter [redacted] and the supporting base is 100 feet in diameter. The water pumping station is 370 by 55 feet.

Although ground was first cleared at the site of the probable nuclear powerplant in [redacted] no activity was observed until approximately five years later [redacted] when construction was first evident. Area 2 is currently in an early stage of construction. The general outline of the two probable reactor buildings and the adjoining building bears a resemblance to the nuclear powerplant at Tomsk, USSR.[1] The measurements of the Lomonosov and Tomsk generator halls are similar. The reactors at Tomsk are graphite moderated. The reactors at the Lomonosov probable nuclear powerplant will probably utilize reactor containment vessels. Plutonium could be extracted from the irradiated uranium to be reused as fuel elements.

An unidentified area is located just east-southeast of area 2. This area was first observed in [redacted]

Area 3

[redacted] photography indicated that clearing of underbrush at area 3 (Figure 1) had begun. By [redacted] a long rectangular building and an associated smaller building had been constructed and a separate section to the west had been cleared. Further south, construction of a sewage disposal plant was started prior to [redacted] the three ells of an E-shaped building and the southern hall of a high-bay building had been developed at the separate west section, and a long linear scar was observed projecting westward from the E-shaped building to the coastline. [redacted] the northern hall and the high-bay of the high-bay building were observed under construction, these sections were still under construction in [redacted]

By [redacted] a steamplant with a steamline under construction was identified, a storage-type building had been completed, the high-bay building was nearing completion, and a corridor was under construction connecting the three ells of the E-shaped building. A pipeline was also under construction parallel to the linear scar. The major part of the area had been secured by a solid fence. [redacted] coverage indicated that construction was continuing.

The storage-type building is [redacted] the long building is [redacted] by [redacted] and its associated building [redacted] The two halls of the high-bay building are [redacted] feet high; the center high-bay section is [redacted] feet high. Dimensions of the three ells of the E-shaped building are, reading from east to west [redacted] The two parts of the connecting corridor are each 155 by 30 feet.

Area 3 is in the early stages of construction, and its function is as yet unidentified. Construction techniques for the high-bay building apparently parallel the methods used in constructing the two high-bay buildings in area 1.

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REFERENCES

[redacted]

MAPS OR CHARTS

AMS Series N701, Sheet 4437 I, Edition 1-AMS, scale 1:50,000

AMS Series 1501 AIR, Sheet 35-3, scale 1:250,000

DOCUMENT

1. NPIC. TCS-80564/67, Tomsk Atomic Energy Complex, USSR, July 1966, Oct 67 (TOP SECRET CHESS RUFF)

REQUIREMENT

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NPIC Project 124321NK

[redacted]